Technical Markets:
From Inspiration to Reality

Slide 1: From Inspiration to Reality

Good morning. My name is (name) from Apple Computer. We've titled today's presentation "From Inspiration to Reality." At Apple, we're very excited about Technical Markets and the solutions set of Design and Modeling. Design and Modeling is a Macintosh® technology-based solutions set that covers a broad spectrum of technical professions.

Slide 2: Technical Markets

These markets include mechanical, electrical, and civil engineering; architecture; industrial design; construction; space and facilities planning; as well as scientific and engineering research.

Slide 3: Macintosh® Installed Base

Since its introduction in 1984, over 3.5 million Macintosh computers have been sold worldwide. That's a pretty impressive figure. But what will impress you even more is that through 1988, 10 percent of those—or 350,000 computers— were sold to technical users.

Slide 4: PC-Based CAD Sales

And in the specialized area of PC-based computer-aided design, Apple ranks number two in market share of units sold worldwide.

Slide 5: Worldwide Revenue and Market Share

In 1989, DataQuest stated that Apple was the number one vendor in world-wide technical computing PC systems. According to Dataquest, Apple shipped $640 million worth of Macintosh® and associated peripherals into the technical computing market.

Side 6: Current Macintosh Customers

Customers using Macintosh® computers for design and modeling include some of the best-known names in the industry: DuPont, Boeing, Martin

Marietta, John Deere, NASA, Baxter Healthcare, Stanford University. And that list continuesa to grow with the introduction of the high-performance Macintosh IIfx and Macintosh color and graphics accelerator cards.

Slide 7: Tool for Technical Professionals

Over the next 20 minutes, we'll talk about why Macintosh® is such an ideal tool for technical professionals. We'll detail how the Macintosh product line, with an expanded range of graphics and computational capabilities enables us to provide design, drafting and general productivity solutions to technical professionals.

Slide 8: Ideas

The realization of ideas — that's the business technical professionals are in. Transforming ideas into reality: into buildings that shelter people, roads that take us places, inventions that make our lives easier and better.

Slide 9: Tools

The challenge has always been to find the right tool to take an idea from concept to completion. For technical users, the Apple® Macintosh® is just such a tool. Macintosh works the way you do, building on the experience you already have and on the tools you're already using. But Macintosh goes much further -- extending your capabilities, enabling you to try out new ideas and explore new possibilities in powerful new ways.

Slide 10: Evolution of an Idea

Whether you're a designer, engineer, architect, or scientist, your projects probably include one or more of these tasks: conceptualization, design, simulation and analysis, visualization, presentation, drafting, and project management.

Slide 11: Broad Spectrum of Design and Productivity Solutions

Macintosh® can help you be more productive and persuasive at every step of the process -- whether it's producing a series of design iterations, getting a bird's-eye view of a three-dimensional model, preparing a client presentation, writing the technical documentation, or measuring the final impact on your bottom line.

That's because Macintosh effectively integrates a broad spectrum of design and productivity solutions onto a single platform.

Slide 12: High-Performance Design Platform

And now, with the Macintosh IIci and IIfx, Macintosh color and graphics accelerator cards, and a growing number of advanced input and output devices, along with other peripherals and add-ons -- you'll be able to consolidate more of your tasks onto the Macintosh than ever before.

Slide 13: The Apple Advantage

What makes Macintosh® such a perfect tool for technical professionals? Fundamentally, it's the same five benefits that make it an ideal personal productivity tool for just about everyone. We've summarized those benefits into something you may be familiar with -- The Apple Advantage.

Slide 14: Powerful Technology That's Simple to Use.

First, Macintosh® provides powerful technology that's simple to use. This unique combination of power and simplicity is of critical importance to the technical user. Specialized applications — such as computer-aided design, modeling and visualization, simulation, and imaging — require a personal computer with tremendous power. Yet, the complexity of these applications can make it difficult for the novice or occasional user to be productive.

Slide 15: A Full Suite of Design Tools

Macintosh® gives you easy access to a full suite of powerful design tools – design tools with enhanced performance since the introduction of the high-performance Macintosh IIfx. Yet, the friendly and intuitive user interface of the Macintosh enables you to bring all employees up to speed quickly and with far less training than other platforms.

Slide 16: Diagnostic Research Study

Study after study clearly confirms the leadership of the Macintosh® in ease of use. A 1988 survey of Fortune 1000 MIS managers found that Macintosh users could be trained in less than half the time and for about 40 percent the cost of MS-DOS users.

Slide 17: Griggs Anderson/Microsoft survey

And Griggs Anderson, in a study conducted for Microsoft, discovered that people not only learn faster, but they also prefer Macintosh®, by a margin of nearly three to one

Slide 18: Thousands of Consistent Applications

Second, with Macintosh® you can choose from thousands of consistent applications that all work together -- from specialized tools to general productivity software. Studies have shown that technical professionals spend as much as 70 percent of their time on non-design tasks such as word processing, project management, and data analysis. Macintosh lets you get all your work done on a single high-performance personal computer platform.

Slide 19: Macintosh Allows You to:

Using the Macintosh® also allows you to cut and paste between documents, incorporate drawings or statistical models into a client proposal, and even take advantage of our superior sound and animation capabilities to really bring a

presentation to life.

Slide 20: High Level of Application Data Integration

And because most of the technical tools for the Macintosh® support at least one of several industry-standard file formats, you're ensured a high degree of application data integration as well. Among these formats are IGES, the Initial Graphics Exchange Standard; DXF; and PICT, Apple's graphics-and-text database format for the Macintosh.

Slide 21: Consistency for Less Training and Greater Productivity

Most important, Macintosh remains the only personal computer where all applications work the same consistent way -- with pull-down menus, real-life icons, and similar commands for similar functions. Drawing tools look like drawing tools. And the trash can looks like… a trash can. All of which further reduces training time and increases productivity.

Slide 22: Broad Product Family that Runs the Same Software.

Third, Macintosh® is part of a broad product family that runs the same software. Eight Macintosh models in three distinct designs -- compact, portable, and modular -- provide a wide choice of computer performance and functionality. In addition, users can choose from an array of tightly-matched peripherals and third-party add-ons.

Slide 23: Consistent User Interface

The consistent user interface of the Macintosh® enables virtually all Macintosh applications to work smoothly and transparently across the entire product line. This allows you to tailor organization-wide computing solutions to your individual needs, without worrying about whether each Macintosh has the right operating system or graphics card installed.

We'll talk more about how the Macintosh family supports the specific requirements of technical professionals later in this presentation.

Slide 24: Built-in Networking that Extends Your Reach

Fourth, only Macintosh provides you with built-in networking that extends your reach, giving you a window into the world of minicomputers, mainframes, and supercomputers.

Slide 25: Access to Other Computer and Network Environments

With technical professionals -- as in most other businesses today -- computer information and resources are distributed across platforms in a wide range of computer and network environments: IBM's SNA, Digital's VAX, TCP/IP, and multivendor environments based on OSI protocols. The AppleTalk® Network System in every Macintosh® provides transparent access to these standard environments. In addition, Apple's FDHD™ SuperDrive™ lets you read and write a variety of floppy-disk file formats, including MS-DOS and OS/2. Moreover, once the information is in your Macintosh, you'll be able to work with it in the same productive way as you do with all Macintosh applications.

Slide 26: Work Group Support

Another advantage of built-in networking is that it allows people within your firm to work more closely together -- sharing files and drawings, and collaborating on group projects. So individuals gain access to the information they need, and organizations get more out of their computing investment.

Slide 27: Growth without disruption

Lastly, the unique architecture of the Macintosh® supports growth without disruption.

Slide 28: Motorola 68000 Family of CPUs

Every system in the Macintosh® line -- from the Macintosh Plus to the Macintosh IIfx -- is based on the Motorola 68000 family of 32-bit microprocessors. Newer Macintosh computers, using the high-performance 68030 processor, offer a super-set of previous models' capabilities, resulting in

a high level of compatibility among the different systems.

Slide 29: Users Build Upon Their Investment

This consistency and stability of design makes it possible for users to build upon their investment in hardware and software -- rather than abandon it in search of higher performance. For example, if you already own a Macintosh II or IIx, but have applications that could benefit from the greater speed and computing power of the IIfx, you can cost-effectively upgrade both the logic board and DRAM to achieve IIfx responsiveness. And future growth will be supported through other hardware upgrades, operating system revisions, and new peripheral products.

Slides 30: Accelerated graphics and full color for the entire modular Macintosh line

Further, every modular Macintosh® -- even the original Macintosh II introduced in 1987 -- can take full advantage of the incredible graphics performance and true 24-bit color of the new Macintosh 8•24 and 8•24GC Display Cards.

Slide 31: (build)

The 8•24GC accelerator is a graphics coprocessor that delivers performance gains in virtually every Macintosh® application. And both the 8•24 and 8•24GC will make your models and detailed drawings sparkle with as many as 16.7 million colors.

Slide 32: Macintosh for Technical Professionals

To be successful as a technical professional, you need people who do a lot of things well. You need designers, planners, presenters, drafters, managers and money-makers. Different tasks require different tools. That’s why Apple® makes a broad line of Macintosh® computers.

Slide 33: Technical Productivity Tools

The compact Macintosh® Plus, Macintosh SE, and SE/30 serve as ideal conceptual design and technical productivity tools. Sharing the same integrated, transportable design popularized by the original Macintosh, these models are an excellent choice for the business of running your business -- for word processing, accounting and payroll, spreadsheets, communications, and project management.

Slide 34: Ideas on the Fly

The Macintosh® Portable has everything you'd expect from a Macintosh in one, easy-to-carry system. The Portable is for people who have to think, write, design, or present on the fly, or at a job site. Its Active Matrix LCD screen presents text and graphics -- even complex animations -- in crisp, clear detail.

Slide 35: Mainstream Design and Drafting

Finally, there are your mainstream design and drafting tools—the SE/30 from the compact line, and modular Macintosh systems including the IIcx, IIx, IIci, and IIfx. The IIci and ...

Slide 36: Macintosh IIfx

...to an even greater extent, the IIfx have been optimized for design, simulation and visualization. Plus, all five Macintosh computers have the power to run A/UX®, Apple's implementation of the UNIX® operating system, while at the same time running such popular Macintosh® design and modeling applications as ClarisCAD and VersaCAD.

Slide 37: Enhanced Solutions Set

Throughout this presentation, we've talked about the growing number of specialized applications Macintosh® offers to the technical user. The Macintosh IIfx, with its 40 MHz clock speed and balanced system architecture; and the 8•24GC graphics accelerator card, which significantly enhances the

performance of these features and more: speeding up pans, zooms, and screen paints. Improving the realism of the designs you work with. And supporting more larger and more complex designs. Additionally, the IIfx and accelerator card open the door to even more industry-standard applications and innovative new tools from Apple® developers, such as simulation and visualization solutions.

Slide 38: Macintosh in Mechanical Engineering

Mechanical engineers, for example, can work interactively with more complex 3D designs in applications such as MacBravo! from Schlumberger or industry-standard AutoCAD from Autodesk. Simulation and analysis solutions, such as software for finite element analysis, run significantly faster. And exciting new packages, such as ClarisCAD and Ashlar Corporation's Vellum -- which greatly simplify the design and drafting process -- perform substantially better on the new system.

Slide 39: Macintosh in Architecture

The Macintosh® and graphics accelerator card enable architects to use applications such as Architrion II from Gimeor Corporation to quickly change perspectives or light sources for a better understanding of potential design trade-offs. Drawings go from wire frame to fully rendered in less time; fly-bys and walk-throughs run more smoothly. And screen paints occur much faster than before.

Slide 40: Macintosh in Electronic Design

And in the area of electronic design, the products support a broad spectrum of solutions -- such as the Professional PCB System from Douglas CAD/CAM -- that speed up layout and routing, greatly accelerate simulations, and accommodate larger and more complex designs.

Slide 41: Performance and Accessibility

The Macintosh® IIfx and 8•24GC graphics coprocessor card truly give you

workstation-like performance with Macintosh accessibility, which helps make Macintosh an indispensable tool for virtually any technical user. By now, I hope I’ve painted a compelling picture of what the Macintosh offers to technical professionals.

Slide 42: Ideas

Great ideas. They can come to you anywhere, at any time. In your car. In a meeting. At your desk. But one thing is certain, no matter how great the idea, it takes a lot of hard work to turn inspiration into reality.

Slide 43: Macintosh and Ideas

Macintosh® is the tool you need to get your ideas off the ground. To succeed, you've got to have the right tools. And now, with the Macintosh IIci, IIfx, Macintosh color and graphics accelerator cards, and an expanded range of specialized software, peripherals and add-ons, Apple® offers the high performance tools you need to create, think, learn, and work — to get your ideas off the ground and really see them fly.

Slide 44: The power to be your best

Once you've experienced the power of Macintosh, you may never go back to the drawing board again. Thank you very much for your time.